

What is claimed is:

1. An apparatus for slabbing a roll having a generally cylindrical shape, an axis, an axial dimension, a radius, a core having a core diameter an outer circumference and a wall thickness, and a material having an outer circumference wound around the core, the apparatus comprising:
  - a) a transport element capable of engaging the roll and of conveying the roll to a slabbing position,
  - b) a cutter capable of separating the material of the roll,
  - c) an axial-traversing element capable of transporting the cutter at least along the entire axial dimension of the material of the roll as, or after, the roll is transported to the slabbing position,
  - d) a radial-traversing element capable of transporting the cutter at least from the outer circumference of the roll to the outer circumference of the core as, or after, the roll is transported to the slabbing position, and
  - e) a controller capable of determining a maximum depth of cut, wherein the motion of the radial-traversing element is limited according to the determined maximum depth of cut.
2. The apparatus according to claim 1 wherein the cutter comprises a powered cutting blade.
3. The apparatus according to claim 1 further comprising a feed section disposed adjacent to the slabbing position, wherein the transport element is capable of engaging a roll disposed in the feed section and of conveying the roll from the feed section to the slabbing position.
4. The apparatus according to claim 1 further comprising a discharge section disposed adjacent to the slabbing position, wherein the roll may be conveyed to the discharge section from the slabbing position.
5. The apparatus according to claim 1 further comprising a material removal section disposed at least partly beneath the slabbing position and capable of receiving material separated from the roll.
6. The apparatus according to claim 1 wherein the cutter is attached to the axial-traversing element and the axial-traversing element is attached to the radial-traversing element.

7. The apparatus according to claim 6 wherein the axial-traversing element is capable of transporting the cutter beyond the entire axial dimension of the roll to a cutter parking position.

8. The apparatus according to claim 1 further comprising a sensor capable of detecting the material of the roll.

9. An apparatus for slabbing a roll having a generally cylindrical shape, an axis, an axial dimension, a radius, a core having a core diameter an outer circumference and a wall thickness, and a material having an outer circumference wound around the core, the apparatus comprising:

a) a transport element capable of engaging the roll and of conveying the roll to a slabbing position,

b) a cutter capable of separating the material of the roll,

c) an axial-traversing element capable of transporting the cutter at least along the entire axial dimension of the material of the roll as, or after, the roll is transported to the slabbing position,

d) a radial-traversing element capable of transporting the cutter at least from the outer circumference of the roll to the outer circumference of the core as, or after, the roll is transported to the slabbing position,

e) a controller capable of determining a maximum depth of cut according to the core wall thickness, and

f) a material removal section disposed at least partly beneath the slabbing position and capable of receiving material separated from the roll,

wherein the motion of the radial-traversing element is limited according to the determined maximum depth of cut.

10. The apparatus according to claim 9 wherein the cutter comprises a powered cutting blade.

11. The apparatus according to claim 9 further comprising a feed section disposed adjacent to the slabbing position,

wherein the transport element is capable of engaging a roll disposed in the feed section and of conveying the roll from the feed section to the slabbing position.

12. The apparatus according to claim 9 further comprising a discharge section disposed adjacent to the slabbing position,

wherein the roll may be conveyed to the discharge section from the slabbing section.

13. The apparatus according to claim 9 wherein the cutter is attached to the axial-traversing element and the axial-traversing element is attached to the radial-traversing element.

14. The apparatus according to claim 13 wherein the axial-traversing element is capable of transporting the cutter beyond the entire axial dimension of the roll to a cutter parking position.

15. The apparatus according to claim 9 further comprising a sensor capable of detecting the material of the roll.

16. An apparatus for slabbing a roll having a generally cylindrical shape, an axis, an axial dimension, a radius, a core having a core diameter an outer circumference and a wall thickness, and a material having an outer circumference wound around the core, the apparatus comprising:

- a) a transport element that engages the roll and conveys the roll to a slabbing position,
- b) a cutter that separates the material of the roll from itself,
- c) an axial-traversing element that transports the cutter at least along the entire axial dimension of the material of the roll as, or after, the roll is transported to the slabbing position,
- d) a radial-traversing element that transports the cutter at least from the outer circumference of the roll to the outer circumference of the core as, or after, the roll is transported to the slabbing position,
- e) a controller that determines a maximum depth of cut,
- f) a material removal section disposed at least partly beneath the slabbing position that receives material separated from the roll,
- g) a feed section comprising a roll-engaging position and disposed adjacent to the slabbing position, and
- h) a discharge section comprising a core-removal position and disposed adjacent to the slabbing position,

wherein the motion of the radial-traversing element is limited according to the determined maximum depth of cut.

17. The apparatus according to claim 16 wherein the cutter comprises a powered cutting blade.

18. The apparatus according to claim 16 wherein the cutter is attached to the axial-traversing element and the axial-traversing element is attached to the radial-traversing element.

19. The apparatus according to claim 16 wherein the axial-traversing element is capable of transporting the cutter beyond the entire axial dimension of the roll to a cutter parking position.
20. The apparatus according to claim 16 further comprising a sensor capable of detecting the material of the roll.